R E P O R T R E S U M E S

ED 020 096 RE 001 271

LANGUAGE THERAPY FOR SCHOLASTIC UNDERACHIEVERS.

BY- ZEDLER, EMPRESS Y.

PUB DATE 26 APR 68

EDRS PRICE MF-$0.25 HC-$0.80 18P.

DESCRIPTORS- *ELEMENTARY SCHOOL STUDENTS, *LEARNING PROBLEMS, *NEUROLOGICALLY HANDICAPPED, *REMEDIAL PROGRAMS, *ACADEMIC ACHIEVEMENT, COMMUNICATION PROBLEMS, COMPREHENSION, REMEDIAL READING, LANGUAGE PROFICIENCY, DYSLEXIA, SOUTHWEST TEXAS STATE COLLEGE

NEUROLOGICALLY HANDICAPPED CHILDREN OF NORMAL INTELLIGENCE CAN BE HELPED TO IMPROVE THEIR ACADEMIC ACHIEVEMENT THROUGH LANGUAGE THERAPY. A 2-YEAR STUDY SUGGESTED NOT ONLY THAT THIS STATEMENT IS TRUE BUT ALSO THAT SIGNIFICANTLY GREATER IMPROVEMENT COMES IN SITUATIONS WHERE THESE STUDENTS ARE PERMITTED TO REMAIN IN REGULAR CLASSROOMS AND TO RECEIVE INDIVIDUAL LANGUAGE THERAPY BY TRAINED CLINICIANS DURING OUT-OF-SCHOOL HOURS. THE THERAPEUTIC PROGRAM TAUGHT THE CHILDREN TO UNDERSTAND WHAT THEY HEARD, TO EXPRESS THEIR OWN THOUGHTS ORALLY, TO READ, AND TO WRITE. THE STUDY SHOWED THAT LANGUAGE DIFFICULTY FOR THESE CHILDREN OFTEN RESULTED FROM INABILITY TO INTERPRET ORAL STATEMENTS OR TO REPRODUCE THEIR OWN IDEAS IN ACCEPTED SPEECH PATTERNS. ALSO, READING CONFUSION IS FREQUENTLY THE RESULT OF PICTURE PLACEMENT IN BOOKS, PRINT TYPE AND SPACING, PRONOUN USAGE, FIGURATIVE LANGUAGE, EXPANDED SENTENCES, AND PUNCTUATION. THIS PAPER WAS PRESENTED AT THE INTERNATIONAL READING ASSOCIATION CONFERENCE (BOSTON, APRIL 24-27, 1968). (BS)

Empress Y. Zedler, Ph.D., Chairman
Department of Special Education
Southwest Texas State College
San Marcos, Texas 78666

ED020096

U. S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

LANGUAGE THERAPY FOR SCHOLASTIC UNDERACHIEVERS

Topic of Meeting: Perception and Reading Disabilities

Topic of Section: Approaches to the Treatment of Dyslexia

Topic of Paper: Management of Reading in the Educational Program of Pupils with Neurologically Based Learning Problems

SYMPOSIUM II, Friday, April 26, 1968, 10:30-11:30 AM

Thirteenth Annual Convention

of the

INTERNATIONAL READING ASSOCIATION

Boston, Massachusetts

RE001 271

LANGUAGE THERAPY FOR SCHOLASTIC UNDERACHIEVERS

A two-year study was conducted at Southwest Texas State College to investigate the hypothesis that scholastically underachieving children with adequate sensory, motor, and intellectual mechanisms, and with medically diagnosed neurological disorders will make significantly greater improvement in academic achievement when they remain in the normal, rich, and highly varied environment of a regular classroom, and, in addition are given concentrated supplementary individual language therapy by trained clinicians outside of school hours; than when they are removed from regular classrooms and taught in special education classes for the neurologically impaired.

Subjects for the study were selected on the basis of: enrollment in public school of at least one and no longer than eight years, adequate visual and auditory acuity, no gross motor defect, IQ of 80 or above, academic underachievement as determined by standardized tests, specific language disorders, and medically confirmed cerebral dysfunction. Fifty experimental subjects were randomly selected for the individualized language therapy as an adjunct to their regular classroom activities. Fifty control subjects were selected who were enrolled in special education classes rather than regular classrooms, and who did not receive individual language therapy. (See Table 3)

It is not the purpose of this paper to present the statistical results of the study. Analysis of the data, however, showed significantly more gain in scholastic achievement for the experimental than for the control subjects. The experimental subjects gained two years in educational age, the controls one year. There is strong evidence in favor of clinical language therapy as an adjunct to regular classroom enrollment for the child with neurologically based learning problems.

As the mimeographed table shows, the comparative gains were significantly higher for the experimental group than for the control group in reading, spelling,

and arithmetic. (See Table I) It seems important, therefore, to describe the language therapy employed in this study.

All therapists or clinical teachers were advanced college students who had had academic preparation in normal development of speech and language, in disorders of speech and language, history of the English language, psychology of learning, applied linguistics, phonetics, and who had had supervised practicum in the regular classroom and elementary classroom curriculum, and in clinical procedures. They were instructed to tailor-make remedial procedures for individual children and to change those procedures in the light of frequent reevaluation.

Materials used in the therapy sessions were the child's regular classroom textbooks and assignments, including incompleted classwork and home assignments. It was hypothesized that improvement in scholastic achievement could occur at grade placement level without a recapitulation of experiences from lower achievement levels.

The philosophy of the therapeutic program was based upon two concepts about normal and disordered language. The first concept concerned the nature of language. In our conceptual framework language is not meaning, but a learned conventional code. (2) Language is not the message; it is the code which communicates the message. Language therapy, therefore, should discover and correct the errors children have made in learning the code.

We found that these errors could be detected in a child's production of and response to speech. The elements we inspected for breakdown were the four which occur in all natural languages: phonemes, morphemes, phrases, and sentences. (4)

The following are representative errors discovered in the oral language of children in this study:

1. disarranged phonemes, e.g. "aminals" for <u>animals</u>, "pinano" for <u>piano</u>, and "priestopal" for <u>episcopal</u>.
2. disordered morphemes, defined as the shortest linguistic elements with meaning, e.g. "womans" for <u>women</u>; "fighted" for <u>fought</u>; and "table sticks" for <u>table legs</u>,

3. phrases out of their designated relationships in the code, e.g. "Hold the umbrella under you and walk over it," and
4. sentences which conform to no permissible structure in the code, e.g. "a hat is a something what's when it's real windy and you got ear to hurts and heads cold you put some hats on and it won't."

In our conceptual framework for clinical teaching we recognized four modalities of language: listening, speaking, reading, and writing. We did not, however, look upon a disorder of language as modality specific. (4) Although their presenting complaint was scholastic underachievement all the children in our study had a general language deficit crossing all language modalities. All had a reduction of available vocabulary and impaired verbal retention span. All were impaired in their perception and production of oral as well as written language.

They confused words with similar sound and/or letter configurations, e.g. dime and diamond, and stable and fable.

They recalled oral instructions not at all, irrelevantly, or, at best, incompletely. Although they could not consistently recall information which they had learned, e.g. "they might know it to-day but not tomorrow," they were usually able to correctly select from multiple choices.

Their vocabularies abounded with such vague terms as "something," "thingamajig" and "deal" which they used for naming.

Their incorrect responses to questions and stated problems were often traceable to failure to break the code which carried the message, rather than to their lack of information. For example to one of the children who had no difficulty with computation, the stated problem At 7¢ each what will be the cost of three apples was unanswerable. When he was instructed to repeat the problem as he understood it he said, "If you each have 7¢ how many apples did you buy."

The language deficits which these children manifested in speech and listening tended to be replicated in their reading and writing. The clinical teachers, therefore,

were instructed to teach a child first to understand what he heard, then to express his thoughts orally, then to read, and last to write.

To improve auditory comprehension each child was taught to repeat all oral instructions before responding. This had three advantages: 1) it let the teacher know whether or not the child understood what was said to him, 2) it reinforced auditory retention and recall, and 3) it provided feedback for constructing a response. Since the children usually could not repeat a complex utterance verbatim, they were taught how to echo or "shadow talk" with the speaker before repeating the complete utterance.

The children were then taught to "think aloud" giving themselves multiple choices from which they often arrived at correct responses. They were encouraged to ask for rewording from the speaker if any part of what they had heard did not fit the structured code of slots into which they had been taught to place the parts of an utterance. For example, they were taught to analyze such a question as Do mockingbirds nest in Texas in the following manner:

What belongs in the first slot?

Mockingbirds.

What belongs in the second slot?

Nest.

But what does nest mean in the second slot?

Whereupon the clinical teacher would supply the word build for the second slot and move nest to the third slot, reconstructing the utterance into Do mockingbirds build nests in Texas a question which the child could now handle.

Three keys or frames (2) were kept readily available on chalkboard or tablet into which the child was taught to fit single utterances which he heard or read, spoke or wrote. The three frames which provided the sets of positions for words in utterances were:

Frame I: The sky is cloudy (today).

Frame II: The boy found the book (under the chair).

Frame III: The girl went home (yesterday).

Any printed or oral sentence which did not conform to the positions in the frames was reconstructed by the clinical teacher for the child. Expanded utterances were simplified. For example the sentence I am glad to say he seemed happy was changed to two sentences: He seemed happy, and I am glad, both of which could be fitted into Frame I. The sentence Then off I went was changed to I went off then and placed in the four slots of Frame III. A complicated sentence such as How alone I felt, in which function words and intonation rather than arrangement signaled the meaning, was simplified to I felt alone.

Pronouns were often a source of confusion to these children. For example, to the question What would you do if you were sent to buy a pound of butter and the grocer said he did not have any more a boy answered, "I'd tell him to sell me some." The child was instructed to repeat the question as he understood it. He responded, "What would I do if I went to buy a pound of butter and the grocer said, 'Little boy you don't have any butter.'" The expanded utterance was reduced to three single utterances, as follows:

Your mother sent you to the store to buy a pound of butter.

The grocer did not have any more butter.

What would you do?

The child responded with alacrity "I'd go to another store."

Such words as "subject," "predicate," "noun," "verb," and "adjective" were never used in therapy sessions unless the child needed to know the term in the regular classroom. In which case he learned that a direct object was any word in slot three of Frame II.

Until the child could understand and produce speech in the code, thus signaling intended meaning, no attempt was made to teach him to read independently. To insure exposure to all material in school textbooks all assignments were read aloud to the child, requiring him to look at the print as the reader moved a pointer under what was

being read. This procedure was initiated to prevent the child's missing out on information which his normal classmates would obtain from reading it. The process proved to be an unexpectedly excellent method for improving the child's ability to read independently. We assume that it is a practical tool for multisensory stimulation.

Even after the children in the study became accurate readers, the reading aloud was continued whenever they requested it. The only requisite was that the listener look as well as listen. To insure that the child was following visually, the reader stopped occasionally at a familiar word, if the listener said the word promptly the reading aloud continued. Reading to the child was never dependent upon his reading a certain amount independently. It was solely for the purpose of covering assignments and exposing the child to literature and information which he might miss if he had to read it by himself. Our experience with such children is that even though they become accurate readers they seldom, if ever, become fast or avid readers.

There was seldom enough time in the therapy sessions for the clinical teacher to be the reader. Readers were found from other sources, the children often selecting them. Several children were selfconscious about being read to, having been given the idea that "it was cheating." As grademarks improved in subjects which had been read aloud to them, however, they overcame their reticence and accepted the reader as a part of the therapeutic program.

The child being read to was instructed to ask for an explanation of any language which was not meaningful to him. He was randomly tested by having to explain on command the meaning of something that had just been read. A prearranged penalty was exacted if he had failed to inquire about something he did not understand.

As tools for independent word attack in reading and written spelling all children in the study were taught syllabication and association between sound and letter symbols.

A few of the youngest children in the study were nonreaders even though they had been in school for at least one year. These children were taught three basic spelling

pattern sets or graphic shapes for those one-syllable words which represent a large part of the word patterns of English. (3) The first pattern was for words with the general shape of consonant-vowel-consonant e.g. fat, cat; sit, sat; and mat, map. The second was the set of spelling patterns that uses the final e to differentiate words from those in the first set e.g. bit, bite; mad, made; and rob, robe. The third set included spelling patterns of more limited application, such as contrasts for spelling set and seat, fed and feed, pad and paid, got and goat, and shot and shout.

In addition to the spelling-patterns the non-readers were taught to say and then write short, original paragraphs in cursive lettering. These paragraphs were immediately typed and subsequently read by the child. This procedure was similar to the phono-tactile-kinesthetic approach suggested by Fernald (1) except that all writing was in cursive letters. Our experience in teaching children with neurologically based language disorders is that most of them learn written spelling better by using cursive than manuscript lettering. The reason seems to be that words are the space differentiated units in cursive writing, whereas each letter is a spatial unit in manuscript writing.

The children in this study were asked to express their opinions about their text books, and to make suggestions as to how the books might be changed to make reading easier for persons like themselves. Their comments could be summarized in seven suggestions:

1. Don't put pictures on the page with print. Pictures do not assist in recognition of letter-patterns, and are often outrightly distracting.
2. Don't put two columns of print on one page. It is difficult, and for some impossible, to interrupt their left to right progression at mid-page.
3. Avoid pronouns. The thinking of these children is literal and not symbolical. I and me mean themselves. It is difficult for them to remember the referrents for he and she.

4. Avoid expressions which have other than literal meanings. Hungry as a bear, busy as a bee, narrow minded, warm regards, cold reception, and deepest love can result in nothing but confusion.
5. Don't change print type. Upper and lower case letters are difficult enough for these children. Italics and illuminated letters make reading distressing for them.
6. Avoid expanded sentences. Use single free utterances that can be easily decoded.
7. Keep punctuation as simple as possible. Quotation and explanation marks are distracting. Until symbols which signal factual information have been mastered, don't introduce graphic shapes which signal feeling and social meanings, and which in talk are signaled by tone sequences, stresses, and pauses.

I have reported our experience at Southwest Texas State College with 100 children who could have been classified as dyslexic. Statistics seem to support the conclusion that our procedures with the experimental subjects were successful. The methods were economical and practical.

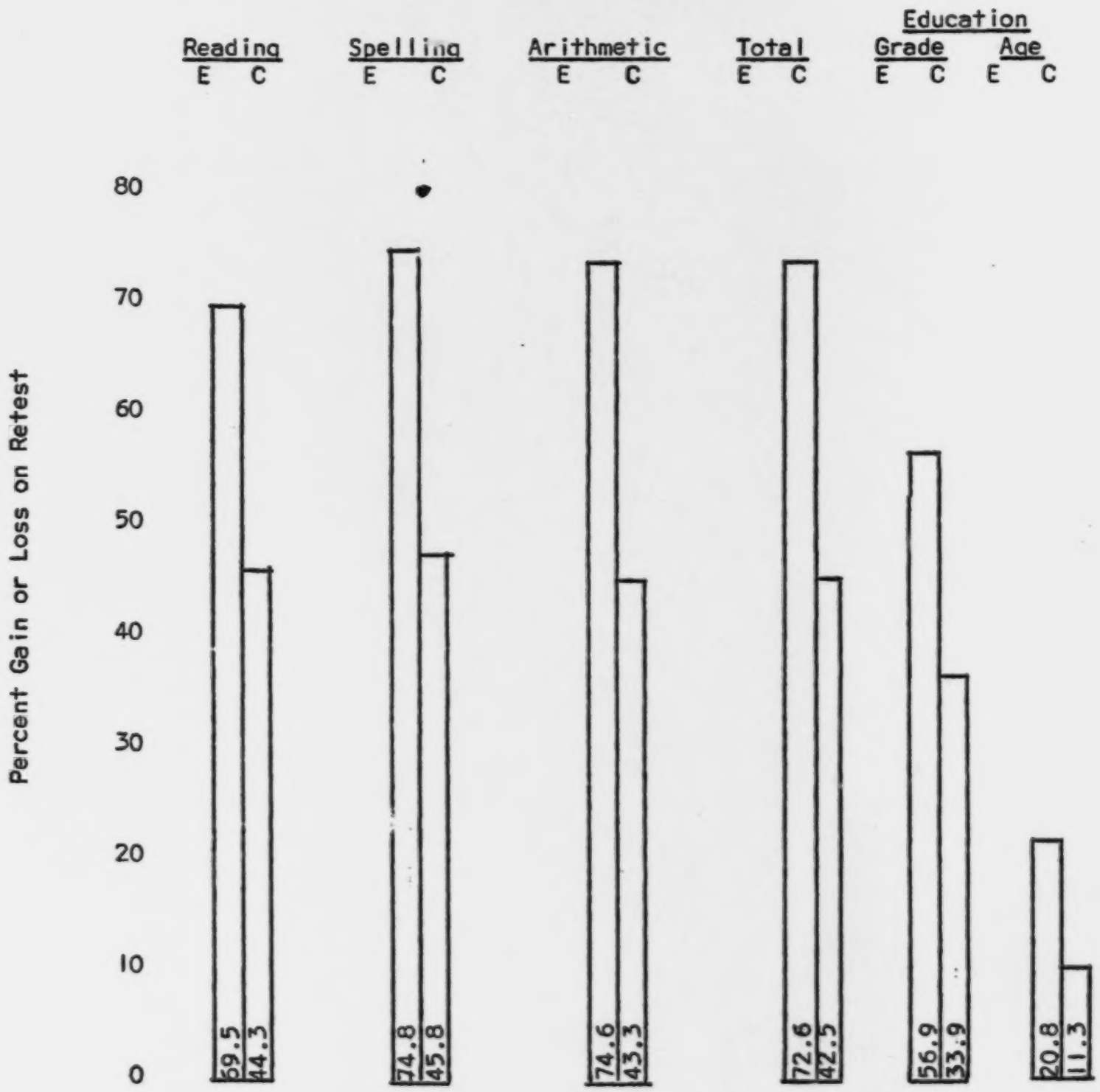
REFERENCES

1. Fernald, Grace M., Remedial Techniques in Basic School Subjects, New York, McGraw-Hill Book Co., Inc., 1943.
2. Fries, Charles C., The Structure of English, New York, Harcourt Brace & Co., 1952.
3. Fries, Charles C., Linguistics and Reading, New York, Holt, Rinehart, and Winston, 1965.
4. Schuell, Hildred; Jenkins, James J.; Jimenez-Pabon, Edward; Aphasia in Adults, New York, Hoeber, 1964.

Results of 1964-67 Research Study at SOUTHWEST TEXAS STATE COLLEGE
"Educational Programming for Children with Neurologically Based Language Disorders"*

TABLE I: COMPARATIVE GAIN ON ACHIEVEMENT TEST

FOR EXPERIMENTAL (E) AND CONTROL (C) GROUPS



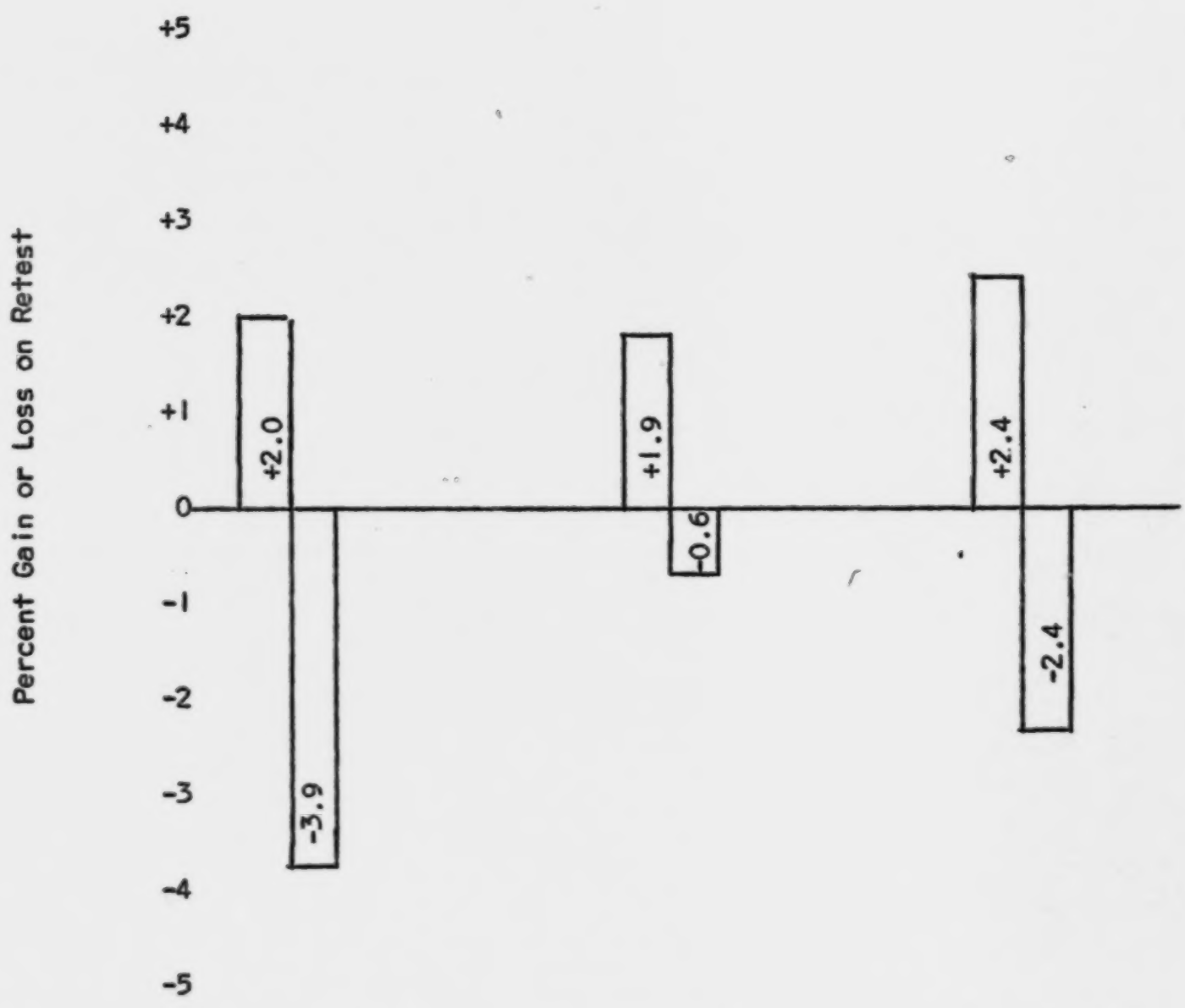
t-test	-2.84	-2.64	-4.14	-4.75	-4.76	-4.78
Confidence Level	>.01	>.01	>.01	>.01	>.01	>.01

*Funded by U. S. Dept. HEW, Office of Education, Cooperative Research, $158,447; and State of Texas, $50,853.

Results of 1964-67 Research Study at SOUTHWEST TEXAS STATE COLLEGE
"Educational Programming for Children with Neurologically Based Language Disorders"*

TABLE 2: COMPARATIVE GAIN ON ABILITY TEST

FOR EXPERIMENTAL (E) AND CONTROL (C) GROUPS



	Verbal Scale	Performance Scale	Full Scale
t-test	-3.76	-1.29	-3.20
Confidence Level	>.01	>.10	>.01

*Funded by U. S. Dept. HEW, Office of Education, Cooperative Research, $158,447; and State of Texas, $50,853.

Results of 1964-67 Research Study at SOUTHWEST TEXAS STATE COLLEGE
"Educational Programming for Children with Neurologically Based Language Disorders"*

TABLE 3: DESCRIPTION OF RESEARCH POPULATION

as of September 1, 1964

Experimental Subjects		Control Subjects	
Each S in regular public school class receiving individual instruction after school		Each S in a special education class for pupils with minimal neurological impairment	
N = 50 (38 males, 12 females)		N = 50 (39 males, 11 females)	
Mean C.A.	9.61 yrs.	Mean C.A.	9.92 yrs.
Mean Ed. Age	8.00 yrs.	Mean Ed. Age	8.14 yrs.
Mean Ed. Grade	2.90	Mean Ed. Grade	3.04
Mean Scholastic Achievement test average	24.57	Mean Scholastic Achievement test average	26.50
Mean IQ WISC full scale	93.72	Mean IQ WISC full scale	92.84
Mean Learning Rate	.83	Mean Learning Rate	.82

*Funded by U. S. Dept. HEW, Office of Education, Cooperative Research, $158,447; and State of Texas, $50,853.

Results of 1964-67 Research Study at SOUTHWEST TEXAS STATE COLLEGE
"Educational Programming for Children with Neurologically Based Language Disorders"*

TABLE 4: SOCIOECONOMIC STATUS OF SUBJECTS BASED ON OCCUPATION OF HEAD OF FAMILY

	Control	Experimental	Total
Professional	8%	8%	8%
Owner-Manager	8%	24%	16%
Semiprofessional-technical	14%	12%	13%
Clerical	16%	18%	17%
Skilled laborer	32%	20%	26%
Semi-skilled laborer	18%	14%	16%
Part-time, seasonal employment	4%	4%	4%
TOTAL	100	100	100

*Funded by U. S. Dept. HEW, Office of Education, Cooperative Research, $158,447; and State of Texas, $50,853.

Results of 1964-67 Research Study at SOUTHWEST TEXAS STATE COLLEGE
"Educational Programming for Children with Neurologically Based Language Disorders"*

TABLE 5: PARENTS' FIRST AWARENESS THAT CHILD HAS A LEARNING PROBLEM

	Control (N-50)	Experimental (N-50)	Total
Pre-kindergarten	22%	14%	18%
Kindergarten	6%	20%	13%
1st Grade	42%	28%	35%
2nd Grade	16%	20%	18%
3rd Grade	8%	6%	7%
4th Grade	2%	2%	2%
5th Grade	2%	8%	5%
6th Grade	0	2%	1%
Unknown	2%	0	1%
Total	100	100	100

* Funded by U.S. Dept. HEW, office of Education, Cooperative Research, $158,447; and State of Texas, $50,853.

Results of 1964-67 Research Study at SOUTHWEST TEXAS STATE COLLEGE
"Educational Programming for Children with Neurologically Based Language Disorders"*

TABLE 6: SCHOOL"S INITIAL EVALUATION OF CAUSE FOR LEARNING PROBLEM

	Control (N-50)	Experimental (N-50)	Total
Immature Immature	12%	28%	20%
Minimal Neurological Impairment	20%	16%	18%
Slow Learner	22%	14%	18%
Lazy, Unmotivated	10%	24%	17%
Emotionally Disturbed	6%	6%	6%
Disordered Speech	8%	0%	4%
Mental Deficiency	4%	2%	3%
Visual Problem	4%	0%	2%
School Could not Assign a Course	6%	10%	8%
Unknown to Parent	8%	0%	4%
Total	100	100	100

* Funded by U.S. Dept. HEW, office of Ed., Cooperative Research, $158,447; and State of Texas, $50,853.

Results of 1964-67 Research Study at SOUTHWEST TEXAS STATE COLLEGE
"Educational Programming for Children with Neurologically Based Language Disorders"*

TABLE 7: PARENTAL OPINION OF EDUCATIONAL PROGRAMS

	Control	Experimental
Positive	64%	86%
Negative	34%	4%
Ambivalent	2%	10%
TOTAL	100	100

CHILD'S OPINION OF EDUCATIONAL PROGRAM

	Control	Experimental
Positive	34%	84%
Negative	30%	10%
Ambivalent	36%	6%
TOTAL	100	100

*Funded by U. S. Dept. HEW, Office of Education, Cooperative Research, $158,447; and State of Texas, $50,853.

Results of 1964-67 Research Study at SOUTHWEST TEXAS STATE COLLEGE
"Educational Programming for Children with Neurologically Based Language Disorders"*

TABLE 8: SCHOOL PLACEMENT AT BEGINNING OF STUDY

AND 6 MONTHS AFTER TERMINATION OF STUDY

	Control		Experimental	
	1964	1967	1964	1967
Special Ed. Unit (MBI)	100%	82%	0	10%
Regular Classroom	0	16%	100%	88%
Lost	0	2%	0	2%
TOTAL	100	100	100	100

*Funded by U. S. Dept. HEW, Office of Education, Cooperative Research, $158,447; and State of Texas, $50,853.

Results of 1964-67 Research Study at SOUTHWEST TEXAS STATE COLLEGE
"Educational Programming for Children with Neurologically Based Language Disorders"*

TABLE 9: PARENTAL EXPECTATIONS FOR CHILD'S EDUCATION

	Control	Experimental	Total
4 year college	34%	50%	42%
2 year college	4%	4%	4%
High school graduation only	28%	34%	31%
Vocational training only	28%	4%	16%
Uncertain	6%	8%	7%
TOTAL	100	100	100

*Funded by U. S. Dept. HEW, Office of Education, Cooperative Research, $158,447; and State of Texas, $50,853.